

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/695,881	RENTSCHLER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hong C. Kim	2185	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/5/06.
2. ☒ The allowed claim(s) is/are 1-9 and 17-21 (renumbered to 1-14).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date <u>5/5/06</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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**Detailed Action**

1. Claims 1-9 and 17-21 are presented for examination. This office action is in response to the amendment filed on 5/5/06.
2. The information disclosure statement (IDS) submitted on 5/5/06 is being considered by the examiner
3. The terminal disclaimer filed on 5/5/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 6678811 has been reviewed and is accepted. The terminal disclaimer has been recorded.

**REASONS for ALLOWANCE**

4. The following is an Examiner's statement of reasons for the indication of allowable subject matter: renumbered claims 1-14 are allowable over the prior art of record because an update of a search previously made does not detect the combined claimed elements as set forth in the claims 1-14. Claims are allowable over the prior art of record because none of the prior art of record teaches or fairly suggests memory controller driver circuitry, comprises a data pad; N data propagation circuits ( $N \geq 2$ ); a multiplexing stage which provides data to at least N-1 of the N data propagation circuits, said multiplexing stage enabling a coupling of a first data input stream to each of the N data propagation circuits when the multiplexing stage is configured in a 1x mode, and

said multiplexing stage enabling a coupling of different data input streams to various of the N data propagation circuits when the multiplexing stage is configured in an Mx mode ( $1 < M \leq N$ ); and output merging circuitry which alternately couples the N data propagation circuits to the data pad to thereby generate either a 1x or Mx stream of data bits at the data pad as described in the specification and together with combination of other claimed element as set forth in the claims. Therefore, claims 1-14 are allowable over the prior art of records.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons For Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Kim whose telephone number is (571) 272-4181. The examiner can normally be reached on M-F 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 whose telephone number is (571) 272-2100.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8. **Any response to this action should be mailed to:**

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**or faxed to TC-2100:**  
(703) 872-9306

Hand-delivered responses should be brought to the Customer Service Window (Randolph Building, 401 Dulany Street, Alexandria, VA 22314).

H Kim  
Primary Patent Examiner  
June 21, 2006

